

37. SEM STUDIES ON THE TESTA SURFACE PATTERN OF TWO SPECIES OF *BAUHINIA* (LEGUMINOSAE: CAESALPINIOIDEAE)

(With a text-figure)

SEM studies on the testa surface pattern of some species of *Bauhinia* have been undertaken by Trivedi *et al.* (1980), Gunn (1991), Kaur *et al.* (1992), Bandyopadhyay *et al.* (1993). In the present paper we have described the testa surface pattern of two species, namely *Bauhinia diphylla* Symes and *B. vahlii* Wight & Arn. that have not been studied earlier.

MATERIALS AND METHOD

Mature seed samples were obtained from herbarium specimens deposited in CAL. For SEM the seeds were cleaned with cotton soaked in absolute ethanol, air dried, mounted on metallic stubs with silver paint after correctly orientating them (see Gunn 1991: 16) and then gold coated in an Edward sputter-

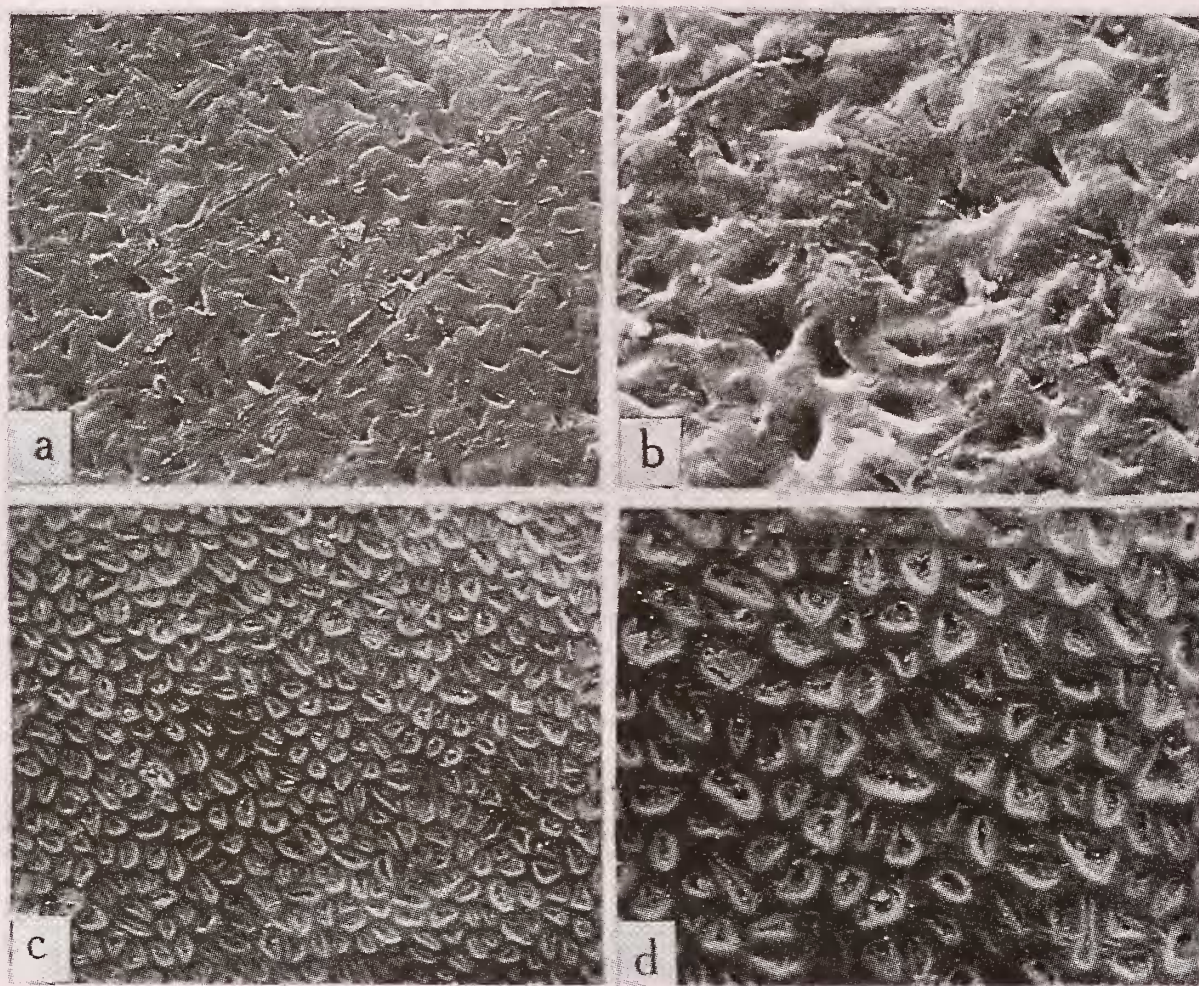


Fig. 1, a-d. Scanning electron micrographs of testa surface pattern.
a-b. *B. diphylla*: a, x 650; b, x 1300. c-d. *B. vahlii*; c, x 3 00; d, x 600.

coater. Observations were made with PSEM 500 or PSEM 515 and the scanning electron micrographs were taken from the central part of the seeds.

Specimens examined: *B. diphylla*: Kurz 2577; *B. vahlii*: Rao 23296.

OBSERVATIONS

B. diphylla (Fig. 1 a-b): The testa surface is pitted. The pits are closely situated and vary in size. They are elongated, slit-like or angular, sometimes more or less circular and have fine striations around

them.

B. vahlii (Fig. 1 c-d): The testa surface is pitted. The pits are closely situated and vary in size but are comparatively larger than those of *B. diphylla*. They are angular to elongated, sometimes more or less circular but rarely slit-like.

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38. *KAEMPFERIA SIPHONANTHA* KING EX BAKER (ZINGIBERACEAE) IN THE ANDAMAN ISLANDS

(With a text-figure)

The genus *Kaempferia* L. is represented by eight species and one variety in India (Karthikeyan 1989) of which *K. siphonantha* King ex Baker is endemic to the Andaman group of islands (Vasudeva Rao 1986). Collected by King's collector and later described by Baker in Flora British India (Hooker 1890). *K. siphonantha* King ex Baker is the only representative of the genus in the islands.

While on survey in Kalpong reserve forests in North Andamans, the first author collected specimens of the species and confirmed its identification after consulting CNH at Calcutta and scrutiny of literature. The present collection of this rare, vulnerable, herbaceous, endemic plant after a gap of more than a century indicates that the species has not become extinct yet but is on the verge of

extinction as the natural habitats have already deteriorated or are under destruction in view of the proposed first ever hydroelectric project in the collection site.

In the present communication, a description of the species accompanied by an illustration (Fig. 1) are given in order to facilitate easy identification and conservation in the field or by *ex situ* conservation and propagation.

Kaempferia siphonantha King apud Baker in Hook. f., Fl. Brit. Ind. 6: 222. 1890.

Herbaceous annuals up to 20 cm tall, no leafy stem. Root stock tuberous with slender root fibres. Leaves 3-4 in a tuft, leafblade up to 8-9 x 2-2.5 cm, oblong, acute, minutely crenate, glabrous, membranous, base unequal sided, sides rounded, oblique; petiole 8-9 cm long. Spike as long